

Virginia 10 RSA Limited Partnership Phase II E911 Report to the FCC
November 9, 2000

In accordance with the requirements of Section 20.18(h) of the Commission's rules¹ and The Wireless Telecommunications Bureau's Public Notice released September 14, 2000,² Virginia 10 RSA Limited Partnership ("VA-10"), the B block cellular licensee for Virginia RSA 10, hereby respectfully submits the following information to the Wireless Telecommunications Bureau ("WTB") concerning its plans for implementation of wireless Enhanced 911 ("E911") Phase II Automatic Location Identification ("ALI") systems.

Please note that for each numbered section of this report WTB's specific inquiry is italicized and VA-10's response is in regular typeface.

Background/Contact Information

(1) *Carrier Identifying Information:* Virginia 10 RSA Limited Partnership, TRS 802191

(2) *Contact Information:* Christopher French, President
Shenandoah Mobile Company
P.O. Box 459
Edinburg, VA 22824
(540) 984-5209 (voice), (540) 984-8192 (fax)
email: cfrench@shentel.net

and

Michael K. Kurtis, Esquire
Kurtis & Associates, P.C.
2000 M Street, NW Suite 600
Washington, D.C. 20036
(202) 328-4500 (voice), (202) 328-1231(fax)
email: mkurtis@kurtispc.com

E911 Phase II Location Technology Information

(1) *Type of Technology:* Identification of the Phase II location technology(ies) that the carrier plans to deploy across its service territory, e.g., network-only, handset-only, hybrid or a combination thereof. Please also include a complete description of the

¹ See *In the Matter of Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *Third Report and Order*, 14 FCC Rcd 17388, 17426-28 (1999), as modified in *Fourth Memorandum Opinion and Order*, FCC 00-326, rel. Sep. 8, 2000, at ¶¶ 75-81.

² See "Wireless Telecommunications Bureau Provides Guidance on Carrier Reports on Implementation of Wireless E911 Phase II Automatic Location Identifications," CC Docket No. 94-102, Public Notice DA 00-2099, rel. Sep. 14, 2000.

Virginia 10 RSA Limited Partnership Phase II E911 Report to the FCC
November 9, 2000

technology(ies) that is/are chosen and the name of the corresponding vendor or vendors. Indicate what technology will be used in each individual area of the carrier's service territory.

VA-10 operates its Virginia RSA 10 cell sites off of the Verizon Wireless ("Verizon") Lucent cellular switch serving the Washington, D.C. MSA. Verizon has advised VA-10 that Verizon currently plans to deploy a network-based technology for its analog and CDMA service areas, which includes the Washington, D.C. MSA, including a combination of network based technologies yet to be determined. Verizon has advised that it intends to select a vendor or vendors in early 2001. As long as VA-10 continues to operate its RSA off of the host Verizon switch, VA-10 believes that it must deploy the same ALI option as that selected by Verizon. However, until such time as Verizon finalizes its precise technology/vendor selection, VA-10 cannot be sure that the technology selected for the urban Washington, D.C. market (which utilizes primarily sectorized cell sites with coverage available from multiple locations for triangulation) will provide the level of accuracy required if implemented in the VA-10 RSA. VA-10 uses primarily omni-directional cell sites which, for the most part, provide coverage to any given area from a single cell site location thereby precluding the ability to utilize triangulation from multiple cell sites providing coverage to the same geographic area. In addition, the Verizon solution may prove to be too expensive to deploy in the rural, omni-directional environment. Accordingly, VA-10 may be required to alter its plans and/or seek necessary waivers once the Verizon decision is finalized.

In addition, Verizon has explained that it may still decide to implement either a handset-based or handset-assisted technology as an alternative. In that event, VA-10 may also be required to change to that alternative.

(2) Testing and Verification: *A description of the testing method used, or to be used, to determine the accuracy of the ALI solution(s) selected, and a description of the results of tests already conducted.*

- (a) Testing Method to be Used: To determine compliance with FCC Phase II accuracy mandates, VA-10 expects to use testing methods based upon those described in OET Bulletin 71.

Results of Tests Already Conducted: VA-10 has been advised that Verizon has conducted tests of three currently available location-technologies under consideration. The data obtained in each specific trial of location technology has not been provided to VA-10. VA-10 has been advised that a citation to a summary of the results of those tests is being submitted by Verizon in conjunction with its November 9, 2000 E911 filing.

(3) Implementation Details and Schedules: *A complete description of the carrier's strategy and schedule for the installation of the hardware and software needed to implement its chosen technology (handset-based, network-based or hybrid systems). For example, indicate whether both hardware and software changes will be necessary and*

Virginia 10 RSA Limited Partnership Phase II E911 Report to the FCC
November 9, 2000

fully describe the precise nature of the changes. In addition, please provide the roll-out schedule for the installation of the ALI technology(ies).

(a) VA-10 cannot develop its roll-out strategy or identify any specific hardware/software requirements until such time as Verizon has completed its technology/vendor selection and the ability of that selection to meet FCC mandated requirements in the rural RSA 10 market has been verified. Verizon has committed to keep VA-10 informed as to its technology and deployment decisions and deployment schedules, and VA-10 will amend this filing as firm information is made available to VA-10 by Verizon.

(b) Roll-out Schedules: Deployment schedules for Phase II technology will be further dictated by PSAP requests.

(4) PSAP Interface: *A description of hardware and software changes necessary to transmit Phase II data to PSAPs and the carrier's strategy and schedule for the installation and/or modification of such hardware or software changes.*

VA-10 has not been advised as to Verizon's specific plans but believes that Verizon is exploring deployment of a Non-Call Associated Signaling (NCAS) network technology utilizing the newly defined network entity called a Mobile Position Center (MPC). The functionality of the MPC is defined in TIA/EIA J-STD-036, "Enhanced Wireless 9-1-1 Phase 2," a standard jointly developed by the communications industry and Public Safety. Per J-STD-036, the MPC provides the point of interface between a wireless carrier and the Public Safety network and serves as the network entity that retrieves, forwards, stores and controls position data within the location network.

As with the remainder of the hardware/software, VA-10 deployment and testing schedule cannot be determined until such time as Verizon finalizes its vendor selection and VA-10 is able to verify operation. VA-10 expects that, to the extent necessary, Verizon will disclose in its November 9, 2000 E911 filing whether software upgrades will be required to support MPC functionality in its Washington, D.C. cellular switch and the timeframe for the implementation of any such upgrades.

(5) Existing Handsets: *A description of the carrier's strategy and schedule for the upgrade and/or replacement of existing customer handsets, if applicable.*

If the Verizon network solution can be implemented in a timely, cost effective and compliant manner in the rural RSA 10 market, VA-10 will deploy a network-based solution or solutions that would not require changes to the handsets. Legacy handsets are covered under this deployment plan.

(6) Location of Non-Compatible Handsets: *A description of the best efforts that carriers employing a handset-based or hybrid system will take to accommodate handsets that are*

Virginia 10 RSA Limited Partnership Phase II E911 Report to the FCC
November 9, 2000

incompatible with the carrier's ALI system, e.g., handsets that do not have ALI capability, or handsets that are ALI-capable, but are not compatible with the carrier's particular handset-based or hybrid system.

If the Verizon network solution can be implemented in a timely, cost effective and compliant manner in the rural RSA 10 market the issue of non-compatible handsets will not be relevant because the network-based location equipment is capable of locating all handsets, including legacy handsets.

(7) Other Information: *Please provide any other information, including a description and history of any Phase II requests received from PSAPs, that will assist the Commission and affected parties in monitoring and coordinating the deployment of E911 Phase II in accordance with the timetables set forth in the Commission's rules.*

A Phase II E911 location system is an extremely complex technology that has never been fully deployed on any large-scale commercial wireless network anywhere in the world. VA-10 believes that a full-scale, end-to-end Phase II deployment will encounter many obstacles and challenges that have not been—and cannot be—foreseen. VA-10 has not received any PSAP requests for Phase II E911 functionality.

Respectfully submitted,

Virginia 10 RSA Limited Partnership

By: /s/ Christopher E. French

Christopher E. French, President of

The General Partner